

Claims

Sub A1

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~~1. An extruded polymeric article comprised of a polymeric matrix and polymeric particles which are substantially spherical, highly crosslinked, have a mean particle size of between 15 and 70 micrometers and have a particle size distribution between 10-110 micrometers wherein the article has a frosted, a surface textured finish or a frosted and surface textured finish.~~

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~~2. The article of Claim 1, wherein (the beads) have a mean particle size of 25-55 micrometers.~~

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Sub A2
D1

~~3. The article of Claim 1 wherein the polymeric matrix is an ABS terpolymer, ASA copolymer, polycarbonate, polyester, PETG, MBS copolymer, HIPS, acrylonitrile/acrylate copolymer, polystyrene, SAN, MMA/S, an acrylonitrile/methyl methacrylate copolymer, impact modified polyolefins, PVC, impact modified PVC, imidized acrylic polymer, acrylic polymer or impact modified acrylic polymer.~~

Sub A3

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~~4. The article of Claim 3 wherein the polymeric matrix is polymethyl methacrylate (based.)~~

Sub A4
D1

~~5. The article of Claim 1 wherein a frosted appearance is achieved through the mismatch of the refractive indices of the polymeric particles and polymeric matrix by greater than 0.02.~~

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Sub A5

~~6. The article of Claim 1 comprised of
a) 20 - 90% polymethyl methacrylate or alkyl methacrylate/alkyl acrylate copolymer (based) matrix;
b) 0 - 50% modifiers; and~~

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c) 5 - 60% highly crosslinked spherical (beads) comprised of about 0-100 % styrene; 0-100% alkyl methacrylate, 0-100% alkyl acrylate and crosslinking agent.

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7. The article of Claim 1 comprised of

a) 20 - 90% polymethyl methacrylate or alkyl methylacrylate/alkyl acrylate copolymer (based) matrix;

b) 0 - 50% modifiers; and

c) 5 - 30% highly crosslinked spherical (beads) comprised of about

0-100 % styrene,

0-100% alkyl methacrylate,

0-100% alkyl acrylate and crosslinking agent.

8. The article of Claim 1 comprised of

a) 20 - 90% polymethyl methacrylate (based) matrix;

b) 0 - 50% modifiers; and

c) 5 - 30% highly crosslinked spherical (beads) comprised of

0 - 50 % styrene

100- 50 % alkyl alkylacrylate, alkyl acrylate or a combination thereof and

0.1-2.5% crosslinking agent.

9. The article of Claim 1, wherein the particles are comprised of

a) 0 - 50% styrene;

b) 45-100% alkyl methylacrylate or alkyl acrylate;

c) 0.01-5% crosslinking agent.

10. The article of Claim 9 wherein the crosslinking agent is ethylene glycol dimethacrylate, divinylbenzene or allyl methacrylate.

11. The article of Claim 10 wherein the crosslinking agent is divinylbenzene.

Sub A4
12. A resin comprised of

- a) 20 - 90% polymethyl methacrylate based matrix;
- b) 5 - 50% modifiers; and
- c) 5 - 30% highly crosslinked spherical beads comprised of

10 10 - 50 % styrene

 90 - 50 % methyl methacrylate

 0.1 - 2.5 % crosslinking agent,

wherein the beads have a mean particle size of 15-70 micrometers, and a particle size distribution of between 15-110 micrometers.

Sub B1
13. The resin of Claim 12 wherein the crosslinking agent is ethylene glycol dimethacrylate, divinylbenzene or allyl methacrylate.

20 14 The resin of Claim 12 wherein the crosslinking agent is allylmethacrylate.

Sub A5
25 15. The resin of claim 12 wherein the beads contain a colorant.

 16. A resin comprised of

- a) 70 - 85% polymethyl methacrylate (based) matrix; and
- b) 15 - 30% highly crosslinked spherical beads comprised of

30 15 - 35 % styrene

 65 - 85 % methyl methacrylate

 0.5-1.5% allylmethacrylate,

wherein the beads have a mean particle size of 15-70 micrometers, and a particle size distribution of between 15-110 micrometers.

Sub A57
cont.

17. A resin comprised of

a) 20 - 90% polymethyl methacrylate or alkyl
methacrylate/alkyl acrylate copolymer (based matrix;

b) 0 - 50% modifiers; and

c) 5 - 30% highly crosslinked spherical beads
comprised of about

0-100 % styrene,

0-100% alkyl methacrylate,

0-100% alkyl acrylate and

crosslinking agent.